

## **REMARKS**

The status of the application is as follows.

Original Claims 1-19 were presented for prosecution.

Original Claims 1-19 presently remain pending for consideration by the Examiner.

Claim 7 is amended herein.

No claims have been amended prior to the present office action response.

The Examiner rejected Claims 1 and 7, under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,715,877 to Molebny (“Molebny”)

The Examiner rejected Claims 2-5, 13, 14 and 16-19 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Molebny in view of U.S. Patent No. 4,777,268 to Randle (“Randle”), and further in view of U.S. Patent No. 6,419,671 to Lemberg (“Lemberg”)

The Examiner rejected Claims 1, 6 and 8 -15 under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 5,757,462 to Nanjo (“Nanjo”) in view of Randle and further in view of Lemberg.

Applicant respectfully traverses the Examiner’s 35 U.S.C. § 103(a) rejections and requests reconsideration in light of the remarks that follow.

## **REMARKS RESPONSIVE TO 35 U.S.C. § 103(a) REJECTIONS**

The Examiner rejected Claims 1 and 7 under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,715,877 to Molebny

The Examiner contends that Molebny discloses, *inter alia*, “a wavefront sensing apparatus comprising an accommodative stimulation device (Badal optometer 42), an electromagnetic wave exposure device and imaging device (Hartmann-Shack wavefront sensor 25).”” [Office Action: Page 2; Item 2-2<sup>nd</sup> Paragraph] The Examiner contends that “[t]he Badal optometer projects a crosshair target on plate 41 to the eye 5 to provide an accommodative state of the eye in a manner well known in the art (col. 10, lines 16-24; paragraph bridging col. 10-11).” [Office Action: Page 2; Item 2-2<sup>nd</sup> Paragraph] The examiner further contends that Molebny discloses the Badal optics axis being disposed perpendicular to the visual axis of the eye and separated from said visual axis by beam splitter 6 (Molebny: fig.18).” [Office Action: Page 2; Item 2-3<sup>rd</sup> Paragraph]

Applicant respectfully contends that Independent Apparatus Claim 1 is not unpatentable over Molebny because Molebny does not teach or suggest each and every feature of Independent Apparatus Claim 1. As quoted above, the Examiner states that:

“The Badal optometer [of Molebny] projects a crosshair target on plate 41 to the eye 5 to provide an accommodative *state* of the eye.” [Office Action: Page 2; Item 2-2<sup>nd</sup> Paragraph, (emphasis supplied)]

However, nowhere does Molebny teach or suggest an accommodative stimulation device utilizing a system of Badal optics that “simultaneously stimulates said eye to undergo at least one reversible accommodative *transition* from any first state of accommodation to any second state of accommodation,” as in Applicant’s Independent Apparatus Claim 1. [Application: Page 26; Claim 1; Lines 4-6 (emphasis supplied)].

Molebny does not teach or suggest each and every feature of Independent Apparatus Claim 1

because the *state* at which a measuring event occurs in Molebny is not the equivalent of the *transition* between states over which imaging information is acquired in Applicant's Independent Apparatus Claim 1. Molebny's teaching or suggestion is limited to conducting a measurement at a time-independent, static endpoint, whereas, Applicant's Independent Apparatus Claim 1 claims the acquisition of imaging information during a time-dependent, dynamic change from one static endpoint to another static endpoint. Accordingly, the projection of a crosshair target on plate 41 to the eye 5 "to provide an accommodative *state* of the eye," in Molebny does not teach or suggest the simultaneous stimulation of an eye to undergo at least one accommodative transition, as in Applicant's Independent Apparatus Claim 1, quoted *supra*.

Referring to col. 10, lines 16-24; paragraph bridging col. 10-11 of Molebny, the Examiner contends that "[t]he Badal optometer [of Molebny] projects a crosshair target on plate 41 [fig. 18] to the eye 5 to provide an accommodative state of the eye in a manner well known in the art." [Office Action: Page 2; Item 2-2<sup>nd</sup> Paragraph] While the Examiner acknowledges that "Molebny does not expressly disclose an adjustable target" [Office Action: Page 2; Item 2-4<sup>th</sup> Paragraph], the Examiner states that "adjustable targets are common expedients in the art as means for changing the location/focus/target image for the eye's fixation and would be obvious to artisans of ordinary skill to include in the device of Molebny, since Molebny discloses a device with a *fixation target*." [Office Action: Page 2; Item 2-4<sup>th</sup> Paragraph (emphasis supplied)]

Applicant respectfully contends that the crosshair target taught by Molebny teaches away from the adjustable accommodative target claimed in Applicant's Independent Apparatus Claim 1 because Molebny only teaches a crosshair target that fixes and maintains a subject's accommodation

at infinity.

More specifically, Molebny teaches that:

“Directly before the measurements, patient has to make the eye to accommodate to a certain distance set by means of the optical system 42. . . For this purpose, one of the lenses 43 or 44, installed on the movable base 45, is moved by means of the electric driver 46 until it reaches a position corresponding to the position of the collimating cross-hairs 41 at *infinity*. [Molebny: Page 6, Paragraph 0076 (emphasis supplied)].

Accordingly, Molebny does not teach or suggest an “adjustable accommodative target” that is used to drive a subject’s accommodation through “at least one reversible accommodative *transition* from any first state of accommodation to any second state of accommodation,” as in Applicant’s Independent Apparatus Claim 1. [Application: Page 26; Claim 1; Lines 4-6 (emphasis supplied)].

For the foregoing reasons, Applicant respectfully maintains that Independent Apparatus Claim 1 is not unpatentable under 35 U.S.C. §103(a) and that Independent Apparatus Claim 1 is in condition for allowance. Since Claim 7 depends from Independent Apparatus Claim 1, Applicant respectfully contends that claim 7 is likewise not unpatentable under 35 U.S.C. §103(a) and is likewise in condition for allowance.

The Examiner rejected Claims 2-5, 13, 14 and 16-19 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Molebny in view to Randle and further in view of Lemberg.

Initially, Claims 2-5 depend from Independent Apparatus Claim 1. Applicant has shown, *supra*, that Independent Apparatus Claim 1 is not unpatentable over Molebny because Molebny does

not teach or suggest each and every feature of Independent Apparatus Claim 1. Accordingly, Independent Apparatus Claim 1 is not unpatentable under 35 U.S.C. §103(a) and is in condition for allowance. Since Claims 2-5 depend from Independent Apparatus Claim 1, Applicant respectfully contends that Claims 2-5 are likewise not unpatentable under 35 U.S.C. §103(a) and are likewise in condition for allowance.

Moreover, Applicant respectfully contends that Claims 2-5 are not unpatentable over Molebny in view of Randle, and further in view Lemberg because, individually or when combined, these references do not teach or suggest each and every feature of Claims 2-5. For example, Molebny in view of Randle, and further in view Lemberg do not teach or suggest a “device that simultaneously stimulates said eye to undergo at least one reversible accommodative ***transition*** from any first state of accommodation to any second state of accommodation,” as in Applicant’s Independent Apparatus Claim 1 [Application: Page 26; Claim 1; Lines 4-6 (emphasis supplied)], from which Claims 2-5 depend.

The Examiner also contends that “[w]ith respect to the limitation of changeable targets or masks,” (corresponding, arguendo, to Applicant’s set of exchangeable target-image-forming masks” of Applicant’s Dependent Claim 3) “Randle teaches at least that different apertures (broadly interpreted as masks) can be interchanged in the ***optical path*** effecting different operability (col. 5, lines 29);” [Office Action: Page3, Item 3-3<sup>rd</sup> Paragraph (emphasis supplied)] adding that “[c]hangeable targets are commonly used in the art to change the location/focus/target image for the eye’s fixation by selectively inserting or illuminating different target elements into the ***optical path***. [Office Action: Page3, Item 3-3<sup>rd</sup> Paragraph (emphasis supplied)].

Nowhere does Randle teach or suggest “at least one member of a set of exchangeable target-image-forming masks” structurally oriented along an “axis of projection,” as in Applicant’s Dependent Claim 3. Rather, as the Examiner states, Randle only teaches “that different apertures ... can be interchanged in the *optical path* ...” [Office Action: Page3, Item 3-3<sup>rd</sup> Paragraph (emphasis added)] Accordingly, Randle does not teach the structural placement of a “set of exchangeable target-image-forming masks” along an “axis of projection” as in Applicant’s Dependent Claim 3.

Moreover, Applicant respectfully contends that the “apertures” taught by Randle cannot be so broadly interpreted as to subsume a “set of exchangeable target-image-forming masks,” as in Applicant’s Dependent Claim 3. Nowhere does Randle teach or suggest that “at least one member of a set of exchangeable target-image-forming masks” ... “forming said adjustable accommodative target” [Application: Page 27; Claim3; Lines 5-10] to drive a subject’s accommodation through “at least one reversible accommodative transition from any first state of accommodation to any second state of accommodation,” as in Applicant’s Independent Apparatus Claim 1 [Application: Page 26; Claim 1; Lines 4-6 (emphasis supplied)], from which Claim 3 depends.

On the contrary, the three apertures taught by Randle -- a fixed “wide open” aperture 42, [Randle: column 5; line 13] a “pinhole” aperture 48 [Randle: column 5; lines 19-20], and a “Scheiner” aperture 52 having two orifices [Randle: column 5; lines 21-22] -- collimate light so that it travels forward in a plane wave without convergence or divergence until it impinges upon a lens 64 [Randle: column 6; lines 27-37].

Applicant respectfully contends that Method Claims 13 and 14 are not unpatentable over Molebny in view of Randle and further in view of Lemberg, because individually or when combined,

these references do not teach or suggest each and every feature of Applicant's Method Claims 13 and 14. For example, nowhere does Molebny in view of Randle and further in view of Lemberg teach or suggest “[a] method comprising the steps of: ... stimulating an eye to undergo at least one reversible accommodative **transition** from any first state of accommodation to any second state of accommodation” as in Applicant's Independent Method Claim 13. [Application: Page 30; Claim 13; Lines 1-3 (emphasis supplied)]

Additionally, nowhere does Molebny in view of Randle and further in view of Lemberg teach or suggest “**simultaneously** acquiring imaging information about said eye by **simultaneously** exposing said eye to electromagnetic waves and **simultaneously** imaging said eye during said least one reversible accommodative **transition** from any first state of accommodation to any second state of accommodation, as in as in Applicant's Independent Method Claim 13. [Application: Page 31; Claim 13; Lines 22-25 (emphasis supplied)].

Moreover, nowhere does Molebny in view of Randle and further in view of Lemberg teach or suggest that the foregoing first and second states of accommodation “are selectable from a range of accommodation defined by and inclusive of a state of total disaccommodation and a state of accommodation corresponding to the accommodative amplitude of said eye,” as in Applicant's Method Claim 14 [Application: Page 31; Claim 14; Lines 2-4], depending from Applicant's Independent Method Claim 13.

Accordingly Applicant's Independent Method Claim 13 is not unpatentable over Molebny in view of Randle and further in view of Lemberg. Because Claims 14 and 16 depend from Applicant's Independent Method Claim 13, Claims 14 and 16 are likewise not unpatentable over Molebny in

view of Randle and further in view of Lemberg.

The Examiner rejected Claims 17-19 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Molebny in view to Randle and further in view of Lemberg.

Applicant respectfully traverses the Examiner's rejection of Independent Claim 17 for the reasons stated, *supra*., in connection with Applicant's traverse of the Examiner's rejection of Claim 3. Accordingly Applicant's Independent Claim 17 is not unpatentable over Molebny in view of Randle and further in view of Lemberg. Because Claims 18 and 19 depend from Applicant's Independent Claim 17, Claims 18 and 19 are likewise not unpatentable over Molebny in view of Randle and further in view of Lemberg.

For the all of the foregoing reasons, Applicant maintains that Claims 2-5, 13, 14 and 16-19 are not unpatentable under 35 U.S.C. §103(a), and that Claims 2-5, 13, 14 and 16-19 are condition for allowance.

The Examiner rejected Claims 1, 6 and 8-15 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Nanjo in view of Randle and further in view of Lemberg.

Applicant respectfully contends that Claims 1, 6 and 8-15 are not unpatentable over Nanjo in view of Randle and further in view of Lemberg, because individually or when combined, these references do not teach or suggest each and every feature of Applicant's Claims 1, 6 and 8-15.

Initially, Nanjo in view of Randle and further in view of Lemberg do not teach an "adjustable accommodative target" that is used to drive a subject's accommodation through "at least one reversible accommodative transition from any first state of accommodation to any second state of accommodation," as in Applicant's Independent Apparatus Claim 1. [Application: Page 26; Claim

1; Lines 4-6 (emphasis supplied)].

Additionally, Nanjo in view of Randle and further in view of Lemberg do not teach a “slit-beam” of a “slit beam projection lamp” and “a Scheimpflug videography system” [Application: Page 28; Claim 6; Lines 1-3] that acquire “imaging information” [Application: Page 26; Claim 1; Line 2] about an eye as “said eye … undergo[es] at least one reversible accommodative transition from any first state of accommodation to any second state of accommodation,” as in Applicant’s Independent Apparatus Claim 1, [Application: Page 26; Claim 1; Lines 4-6] from which Claim 6 depends. Accordingly, Claims 1 and 6 are not unpatentable over Nanjo in view of Randle and further in view of Lemberg, and hence are in condition for allowance.

Moreover, Nanjo in view of Randle and further in view of Lemberg do not teach a “slit-beam” of a “slit beam projection lamp” and “a Scheimpflug videography system” that acquire “imaging information” about an eye “as said eye … undergo[es] at least one reversible accommodative *transition* from any first state of accommodation to any second state of accommodation, *without loss of Scheimpflug alignment*” as in Applicant’s Independent Apparatus Claim 8, [Application: Page 28; Claim 8; Lines 1-10 (emphasis supplied)] from which Claims 9-12 depend.

Accordingly, Claims 1, 6 and 8-12 are not unpatentable over Nanjo in view of Randle and further in view of Lemberg, and hence are in condition for allowance.

Applicant respectfully contends that Method Claims 13-15 are not unpatentable over Nanjo in view of Randle and further in view of Lemberg, because individually or when combined, these references do not teach or suggest each and every feature of Applicant’s Method Claims 13 - 15. For

example, nowhere does Nanjo in view of Randle and further in view of Lemberg teach or suggest “[a] method comprising the steps of: … stimulating an eye to undergo at least one reversible accommodative *transition* from any first state of accommodation to any second state of accommodation” as in Applicant’s Independent Method Claim 13. [Application: Page 30; Claim 13; Lines 1-3 (emphasis supplied)]

Additionally, nowhere does Nanjo in view of Randle and further in view of Lemberg teach or suggest “*simultaneously* acquiring imaging information about said eye by *simultaneously* exposing said eye to electromagnetic waves and *simultaneously* imaging said eye during said least one reversible accommodative *transition* from any first state of accommodation to any second state of accommodation, as in as in Applicant’s Independent Method Claim 13. [Application: Page 31; Claim 13; Lines 22-25 (emphasis supplied)].

Moreover, nowhere does Nanjo in view of Randle and further in view of Lemberg teach or suggest that the foregoing first and second states of accommodation “are selectable from a range of accommodation defined by and inclusive of a state of total disaccommodation and a state of accommodation corresponding to the accommodative amplitude of said eye, as in Applicant’s Method Claim 14 [Application: Page 31; Claim 14; Lines 1-4], depending from Applicant’s Independent Method Claim 13.

Nor does Nanjo in view of Randle and further in view of Lemberg teach or suggest simultaneously acquiring imaging information about an eye by “*simultaneously* illuminating said eye using a slit-beam of a slit lamp projection light” and “*simultaneously* “videographing said eye using a Scheimpflug videography device,” during at least one reversible accommodative transition

from any first state of accommodation to any second state of accommodation, as in as in Applicant's Method Claim 15, depending from Applicant's Independent Method Claim 13 [Application: Page 31; Claim 13; Lines 2-3 (emphasis supplied)].

Accordingly, Applicant's Independent Method Claim 13 is not unpatentable over Nanjo in view of Randle and further in view of Lemberg. Because Claims 14 and 14 depend from Applicant's Independent Method Claim 13, Claims 14 and 15 are likewise not unpatentable over Nanjo in view of Randle and further in view of Lemberg.

For the foregoing reasons, Applicant maintains that Claims 1, 6 and 8-15 are not unpatentable under 35 U.S.C. §103(a), and that Claims 1, 6 and 8-15 are condition for allowance.

As indicated, *supra*., the Examiner's cited references, individually or when combined, do not teach or suggest each and every feature of the present application. However, even if, *arguendo*, the Examiner's cited references, individually or when combined, did teach or suggest each and every feature of the present application, the Examiner has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references, as required by MPEP § 2142.

Moreover, the Examiner has not identified a suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings, as required by MPEP § 2143.

Nor has the Examiner has made a finding as to the specific understanding or principle within the knowledge of the skilled artisan that would have provided the motivation combine the references.

The teaching of Molebny is directed to "a new method of measurement of wave

aberrations of an eye and a device for performing the same.” [Molebny: Page 1; Paragraph 0008].

The teaching of Randle directed to a “device to train one to overcome empty field myopia and to provide therapy for behavioral myopia. [Randle: Column 2; Lines 67-68]

The teaching of Lemberg is directed to “devices, systems and methods which can provide measurements of the refractive error in the eye before, during and after vision correction surgery.” [Lemberg: Column 2; Lines 34-37].

The teaching of Nanjo is directed to providing an “apparatus for [statically] photographing a section of an anterior part of an eye.” [Nanjo: Column 2; Lines 17-18].

There is nothing in any of these references that would suggest or motivate their combination or sub-combination to invent an apparatus that acquires imaging information about an eye as the apparatus simultaneously stimulates the eye to undergo at least one reversible accommodative transition as disclosed and claimed in the present application.

Applicant respectfully submits that the Examiner’s alleged combination relies on precisely the kind of hindsight that the law forbids to support a rejection based on obviousness. *In re Rouffet*, 149 F.3d 1350 at 1358, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998), citing *In re Gorman*, 933 F.2d 982, 986, 18 U.S.P.Q.2D (BNA) 1885, 1888 (Fed. Cir. 1991). The motivation to combine requirement is a safeguard against the use of hindsight combinations to negate patentability. *In re Rouffet*, 149 F.3d 1350 at 1359, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). Accordingly, the examiner “must show reasons that the skilled artisan, confronted with the same problems as the inventor [- - how to acquire dynamic imaging information about a lens as it undergoes dynamic

accommodative transitions - -] and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.” *In re Rouffet*, 149 F.3d 1350 at 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). [emphasis supplied]

Where, as here, there is no evidence submitted to support a motivation to combine, a rejection based on a *prima facie* case of obvious is improper. *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). Such an approach is “an illogical and inappropriate process by which to determine patentability.” *Sensonics, Inc. v. Aerasonic Corp.*, 81 F.3d 1566, 1570, 38 U.S.P.Q.2D (BNA) 1551, 1554 (Fed. Cir. 1996).” *In re Rouffet*, 149 F.3d 1350 at 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998).

In light of the foregoing discussion, Claim 1-19 are in condition for allowance under 35 U.S.C § 103(a). Applicant respectfully request that the Examiner’s obviousness rejection of Claims 1-19 under 35 U.S.C. § 103(a) be withdrawn.

## **CONCLUSION**

In summary, as presently amended and based on the preceding remarks, Applicant respectfully believes that Independent Apparatus Claims 1, 8, 17, Independent Method Claim 13, and all claims depending therefrom meet the acceptance criteria for allowance and therefore, upon the Examiner’s reconsideration, requests allowance.

The examiner is invited to telephone the undersigned if this would in any way advance the prosecution of this case. If the Examiner believes that anything further would in any way advance the prosecution of this case or be helpful to place the application in condition for allowance, the

Examiner is invited to contact Applicant's attorney at the telephone number listed below.

If any fees, including extension of time fees, are due as a result of this response, please charge Deposit Account No. 503033. This authorization is intended to act as a constructive petition for an extension of time, should an extension of time be needed as a result of this response. In addition, please deduct any fees or credit any overpayments to Deposit Account No. 503033.

Respectfully submitted,

  
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